

**BLOOD-BORNE
PATHOGENS
29 CFR 1910.1030**

Definition

**Bloodborne Pathogens:
pathogenic microorganisms
present in human blood that
can cause disease. Examples
include but are not limited
to Hepatitis B (HBV) and
Human Immunodeficiency
Virus (HIV)**

Definition

**Occupational Exposure:
Reasonably anticipated
skin, eye, mucous
membrane, or parenteral
contact with blood or other
potentially infectious
materials that may result
from performance of duties**

Definition

- ❑ **Other Potentially Infectious Materials (OPIM) - most body fluids. Addressed under Universal Precautions**
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Definition

- ❑ **PPE: General work clothes not adequate**
 - Goggles or faceshield**
 - Respirator (HEPA for TB, dust mask for BBP)**
 - Gloves**
 - Apron or coveralls**
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Exposure Control Plan

- ❑ **Written - includes**
 - list of job series affected**
 - list of tasks done by those in other job series**
 - ❑ **Methods of compliance**
 - Universal precautions**
 - Work practice/engr controls**
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Exposure Control Plan

- ❑ **Addresses use of PPE**
 - ❑ **Work site must be in a clean and sanitary condition**
 - ❑ **Appropriate waste disposal**
 - ❑ **HBV post-exposure (done prophylactically for medical personnel)**
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Post-exposure Follow-Up

- ❑ **HBV vaccine**
 - ❑ **Medical evaluation to include:**
 - Route and circumstances of exposure**
 - ID of source individual**
 - Blood testing of source (exposed employee informed)**
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Post-exposure Follow-Up

□ Exam

- Collection and testing of blood**
 - Counseling**
 - Evaluation of Reported Illnesses**
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Training

- ❑ Provided to all exposed employees**
 - ❑ At initial assignment and annually**
 - ❑ When new tasks introduced**
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Training Includes

- ❑ **Copy of standard**
 - ❑ **Epidemiology of HIV/HBV**
 - ❑ **Modes of transmission of BBP**
 - ❑ **Exposure control plan**
 - ❑ **How to recognize hazardous tasks**
 - ❑ **PPE Limitations**
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Training Includes

- ❑ Info on HBV vaccine**
 - ❑ Actions in the event of incident**
 - ❑ Info on post-exposure followup**
 - ❑ Info on color coding**
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UNIVERSAL PRECAUTIONS

Concept:

- ❑ **All should be assumed to be infectious for HIV, HBV, and other bloodborne pathogens**

WHY USE UNIVERSAL BLOOD/BODY FLUID PRECAUTIONS?

- ❑ **Since medical history and examination cannot reliably identify all patients infected with HIV or other blood-borne pathogens, these precautions should be consistently used for all patients.**
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BODY FLUIDS **to which Universal** **Precautions Apply:**

- ❑ **BLOOD is the single most important source of HIV, HBV, and other blood-borne pathogens.**
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OTHER BODY FLUIDS

Where Universal Precautions Apply

- ❑ **SEMEN (sexual transmission)**
 - ❑ **VAGINAL SECRETIONS**
 - ❑ **TISSUES/ORGANS**
 - ❑ **CEREBROSPINAL FLUID**
 - ❑ **SYNOVIAL FLUID (in the joints)**
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OTHER BODY FLUIDS

Where Universal Precautions Apply

- ❑ **PLEURAL FLUID (chest cavity)**
 - ❑ **PERITONEAL FLUID (abdominal cavity)**
 - ❑ **AMNIOTIC FLUID (around baby in uterus)**
 - ❑ **HUMAN BREAST MILK**
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**UNLESS VISIBLE BLOOD
IS PRESENT, Universal
Precautions Do Not Apply
to:**

- ❑ **FECES OR URINE**
 - ❑ **NASAL SECRETIONS**
 - ❑ **SWEAT OR TEARS**
 - ❑ **SPUTUM**
 - ❑ **VOMITUS**
 - ❑ **SALIVA (Unless dental procedures)**
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EMERGENCY MEDICAL/PUBLIC SAFETY WORKERS

- ❑ When body fluids are encountered in UNCONTROLLED EMERGENCY SITUATIONS where differentiation between fluids is difficult, treat all body fluids as potentially hazardous**
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TRANSMISSION OF HIV/HBV

Occurs Through:

- ▣ **Sexual Contact**
 - ▣ **Exposure to Blood:**
 - sharing contaminated syringes/needles**
 - needle-stick injuries**
 - contact with open skin/lesion**
 - ▣ **Perinatal Exposure (mother to child)**
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RISK OF INFECTION Following Needle-Stick Exposure:

- ❑ Less than 0.5% for HIV infected blood**
 - ❑ 6 to 30% for HBV infected blood**
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LIKELIHOOD OF HIV/HBV INFECTION

Following Skin Exposure

▣ Depends on:

- innate infectivity of the virus**
 - concentrations of virus**
 - duration of contact**
 - presence of lesions on the skin of the employee**
 - for HBV, the immune status of the employee**
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RISK OF TRANSMISSION From Human Bites:

- ▣ **Epidemiological Studies Show:**
 - HBV positive saliva has been infectious in human bites**
 - HIV transmission has failed to occur after human bites, or contamination of cuts and open wounds with saliva of HIV infected persons**
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HUMAN BITES

- ❑ **Wash with soap and water as soon as possible**
 - ❑ **Report the incident to supervisor**
 - ❑ **Obtain appropriate medical follow-up**
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HIV IS NOT TRANSMITTED By:

- ❑ **Ordinary Social Contact**
 - ❑ **Insects**
 - ❑ **Air, Water, or Food**
 - ❑ **Ordinary Household Activities, except where sexual contact or sharing contaminated needles are considered “ordinary”**
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CHARACTERISTICS OF HIV

- ❑ **Not stable outside the body**
 - ❑ **Drying causes 90 to 99% reduction of HIV concentration within several hours**
 - ❑ **HBV can live in a dry environment for at least seven days or longer**
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INCUBATION TIMES

Time from Exposure to Symptoms

- ▣ HIV Infection - time required for body to develop antibodies to HIV or “positive blood test”**
 - Minimum - 2 weeks**
 - Average - 6 to 12 weeks**
 - Maximum - 6 months**
 - AIDS - up to 10 years**
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INCUBATION TIMES

Time from exposure to Symptoms

- ❑ **Hepatitis B Infection**
 - Minimum - 45 days**
 - Average - 60 to 90 days**
 - Maximum - 6 months**
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PRECAUTIONS

Protective Barriers (PPE)

- ▣ **GLOVES - wear when:**
 - touching blood, body fluids, mucous membranes, or non-intact skin**
 - handling items soiled with blood or body fluids**
 - performing venipuncture or other vascular procedures**
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Precautions Protective Barriers (PPE)

- ❑ **GLOVES should be changed after contact with each patient**

FIGHTS/ASSAULTS

- ❑ **Combative situation**
 - if blood present or possible put on gloves as situation permits**

SEARCHES

- ❑ **Use mirrors/flashlights to search low visibility or hidden areas - don't put your hands where you can't see**
 - ❑ **Wear gloves if exposure to blood is likely**
 - ❑ **Wear gloves for all body cavity searches**
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PPE

- ❑ **No single type or thickness of glove is suitable protection for all situations**
 - ❑ **Gloves will not prevent needlesticks**
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MASKS, PROTECTIVE EYE WEAR, OR FACE SHIELDS

- ❑ Wear during procedures likely to generate droplets of blood or other body fluids that may splash into the mucous membranes of the eyes, nose, or mouth**
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GOWNS OR APRONS

Wear During:

- ❑ **Procedures that are likely to generate splashes of blood or other body fluids**
 - ❑ **If clothes become soiled, change to clean clothes as soon as possible**
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CLOTHING

- ▣ **If Contaminated with Blood**
 - change as soon as possible**
 - ▣ **Contaminated Personal Clothing**
 - transport in plastic bags**
 - launder/dry clean according to manufacturer's instructions**
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Clothing

- ❑ **Boots/Leather Goods**
 - brush scrub with soap and hot water**

HAND WASHING

- ❑ Wash all exposed skin surfaces immediately and thoroughly if contaminated with blood or body fluids**
 - ❑ Wash hands immediately after gloves are removed**
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HANDWASHING

- ❑ When hand washing facilities with soap and running water are not available, use waterless antiseptic hand cleanser as a temporary measure**
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SHARPS - Needles, Scalpels, Other Sharp Objects

- ❑ **PREVENT NEEDLE-STICK
INJURIES**

- DO NOT recap used needles**
 - DO NOT break off, remove,
or manipulate needles by
hand**

- ❑ **AFTER USE, discard in
puncture resistant containers**

CPR

Cardiopulmonary Resuscitation

- ❑ **Mouth to mouth resuscitation should be avoided IF POSSIBLE**
 - ❑ **CPR mask with a one-way valve or resuscitation bag should be available**
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ENVIRONMENTAL CONSIDERATIONS

Housekeeping

- ❑ **Routine cleaning of environmental surfaces is adequate**
 - ❑ **Use any disinfectant-detergent (i.e. household bleach)**
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CLEANING SPILLS of Blood or Body Fluids

- ❑ wear disposable gloves**
 - ❑ wear other protection if splashing is likely**
 - ❑ remove visible material with disposable towels**
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Cleaning Spills

- ❑ disinfect area with 1:10 household bleach solution**
 - ❑ discard contaminated items in plastic bag**
 - ❑ remove gloves last and wash hands**
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DECONTAMINATION/ DISPOSAL

- ❑ thrown feces/body fluids**
 - removed with paper towels while wearing gloves**
 - ❑ decontaminate the area**
 - ❑ dispose of towels/gloves in appropriate bag**
 - ❑ change clothing if necessary**
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LAUNDRY

- ❑ **handle soiled linen as little as possible**
 - ❑ **roll linens - do not shake into the air**
 - ❑ **hold away from your clothes**
 - ❑ **bag at location of use**
 - ❑ **use leak-proof bags when necessary**
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DISINFECTION STERILIZATION

- ❑ **Medical Devices or Instruments**
 - clean thoroughly**
 - expose to sterilant or disinfectant**
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INFECTIVE WASTE

- ❑ **Bulk blood, suctioned fluids, excretions and secretions - carefully pour down a drain connected to a sanitary sewer**
 - ❑ **items saturated or caked with dried blood**
 - place in leak-proof red or properly labeled bags**
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INFECTIVE WASTE

- ❑ **sharps - place in
impervious containers**
 - ❑ **microbiology lab,
pathology, blood
specimens, blood waste -
DOUBLE BAG AND LABEL**
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DISPOSAL METHODS

Infective Waste

- ▣ **Dispose according to state law for regulated medical waste**
 - incinerate**
 - steam sterilize**
 - chemical disinfection**
 - medical waste hauler**
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FOR ADDITIONAL INFORMATION Call

- ▣ **AIDS HOTLINE**

- 1-800-592-1861**

- ▣ **GENERAL INFO (state):**

- COUNSELING/TESTING**

- ABERDEEN - (605) 622-2373**

- PIERRE - (605) 773-5348**

- RAPID CITY- (605) 394-2370**

- SIOUX FALLS(605) 339-6666**

REPORT!!

- ❑ **All incidents involving FTS personnel must be reported to the OHN at 399-6620!!**
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